

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A wireless communication method for assigning multi-paths to Rake receiver fingers, the method comprising:

(a) establishing a Rake finger assignment database;
(b) categorizing a plurality of multi-path signals in the database into a verified group and an unverified group, wherein the verified group includes multi-path signals that have been detected more than once and the unverified group includes multi-path signals that have not been detected more than once; and

(c) categorizing the multi-path signals in the verified group into an assigned subgroup and an unassigned subgroup, wherein each of the multi-path signals in the assigned subgroup is assigned to a Rake receiver finger and each of the multi-path signals in the unassigned subgroup is not assigned to a Rake receiver finger, wherein each multi-path signal is assigned a respective bin in the database that includes a data structure having a verification flag data field;

during a measurement interval, receiving a plurality of newly measured multi-path signals;

comparing each newly measured multi-path signal to the multi-path signals in the database to determine if each newly measured multi-path signal is found in the database; and

if a multi-path signal in the database, that belongs to the unassigned subgroup, matches a newly measured multi-path signal, setting the verification flag data field such that it indicates that the multi-path signal is verified.

2. (currently amended): The method of claim 1 further comprising:

(d) comparing the signal strength of each multi-path signal to a predetermined noise floor threshold; and

(e) if the signal strength of the multi-path signal is less than the noise floor threshold, removing the multi-path signal from the database.

3. (original): The method of claim 2 wherein if the removed multi-path signal is categorized in the assigned group, the Rake receiver finger is no longer assigned to the removed multi-path signal.

4. (currently amended): The method of claim 1 further comprising:

~~(d) during a measurement interval, receiving a plurality of newly measured multi-path signals;~~

~~(e) comparing each newly measured multi-path signal to the multi-path signals in the database to determine if each newly measured multi-path signal is found in the database; and~~

~~(f) if a newly measured multi-path signal is not found in the database, adding the newly measured multi-path signal to the database.~~

Claims 5 and 6 (canceled)

7. (original): The method of claim 1 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field indicating the pilot phase of the multi-path signal.

8. (original): The method of claim 1 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field indicating the averaged signal strength of the multi-path signal.

9. (original): The method of claim 1 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field identifying an assigned Rake receiver finger.

10. (currently amended): A wireless communication apparatus system for assigning multi-paths to Rake receiver fingers, the apparatus system comprising:

(a) a Rake finger assignment database, wherein ~~;(b) means for~~ are categorized a plurality of multi-path signals are categorized in the database into a verified group and an unverified group, ~~wherein~~ the verified group including ~~includes~~ multi-path signals that have been detected more than once and the unverified group includes multi-path signals that have not been detected more than once, and ~~;(c) means for categorizing~~ the multi-path signals are categorized in the verified group into an assigned subgroup and an unassigned subgroup, wherein each of the multi-path signals in the assigned subgroup is assigned to a Rake receiver finger and each of the multi-path signals in the unassigned subgroup is not assigned to a Rake receiver finger, wherein each multi-path signal is assigned a

respective bin in the database that includes a data structure having a verification flag data field, and during a measurement interval, a plurality of newly measured multi-path signals are received and compared to the multi-path signals in the database to determine if each newly measured multi-path signal is found in the database, and the verification flag data field is set such that it indicates that the multi-path signal is verified if a multi-path signal in the database, that belongs to the unassigned subgroup, matches a newly measured multi-path signal.

11. (currently amended): The apparatus system of claim 10 further comprising: (d) ~~means for comparing wherein~~ the signal strength of each multi-path signal is compared to a predetermined noise floor threshold, ~~and ; and (e) means for removing~~ the multi-path signal is removed from the database if the signal strength of the multi-path signal is less than the noise floor threshold.

12. (currently amended): The apparatus system of claim 11 wherein if the removed multi-path signal is categorized in the assigned group, the Rake receiver finger is no longer assigned to the removed multi-path signal.

13. (currently amended): The apparatus system of claim 10 wherein, ~~during a measurement interval, a plurality of newly measured multi-path signals are received, the system further comprising:~~

~~(d) means for comparing each newly measured multi-path signal to the multi-path signals in the database to determine if each newly measured multi-path signal is found in the database; and~~

~~(e) means for adding the newly measured multi-path signal is added to the database, if a newly measured multi-path signal is not found in the database.~~

Claims 14 and 15 (canceled)

16. (currently amended): The apparatus system of claim 10 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field indicating the pilot phase of the multi-path signal.

17. (currently amended): The apparatus system of claim 10 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field indicating the averaged signal strength of the multi-path signal.

18. (currently amended): The apparatus system of claim 10 wherein each multi-path signal is assigned a respective bin in the database, said bin including a data structure including a data field identifying an assigned Rake receiver finger.

19. (currently amended): The apparatus system of claim 13 wherein the ~~system is a timeslot-based system and~~ the measurement interval occurs on a frame-by-frame basis.

20. (currently amended): A wireless communication apparatus system for assigning multi-paths to Rake receiver fingers, the apparatus system comprising:

(a) a processor which includes a path search scheduler for receiving signals from higher layers and generating scheduling data;

(b) a memory device in communication with the processor, wherein the memory device has a first portion for receiving the scheduling data and storing the results of a pilot path search process performed by the path search scheduler, and a second portion for storing the results of a pilot strength measurement (PSM) process running on the processor, wherein the processor implements a path position detection process and a finger assignment process for providing an assignment to a Rake finger pool, the path position detection process searching for all multi-paths for a plurality of wireless transmit/receive units (WTRUs) in a round-robin search order; and

(e) a path search vector correlator (VC) grid for receiving data from the first portion of the memory device and providing an output which is evaluated by the PSM process to generate evaluation results which are stored in the second portion of the memory device for access by the path position detection process.